

Exhibit 34

Deposition of Hal J. Singer, Ph.D.
(September 27, 2017) (excerpted)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

- - -
IN RE: : Civil Action
: DOCKET NO.
CUNG LE, NATHAN QUARRY, : 2:15-cv-01045-RFB-
JON FITCH, BRANDON VERA, : (PAL)
LUIS JAVIER VAZQUEZ and :
KYLE KINGSBURG, on behalf : CLASS ACTION
of themselves and all :
others similarly :
situated, :
:
Plaintiffs, :
:
v. :
:
ZUFFA, LLC, d/b/a :
ULTIMATE FIGHTING :
CHAMPIONSHIP and UFC, :
:
Defendants. :
- - -

Wednesday, September 27, 2017
- - -

Videotaped deposition of
HAL J. SINGER, Ph.D., taken pursuant to
notice, was held at the law offices of
Berger & Montague, P.C., 1622 Locust
Street, Philadelphia, Pennsylvania 19103,
beginning at 9:24 AM, on the above date,
before Constance S. Kent, a Certified
Court Reporter, Registered Professional
Reporter, Certified LiveNote Reporter, and
Notary Public in and for the Commonwealth
of Pennsylvania.

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<p>1 arrangement. 2 So by construction, if I -- 3 if I assume in a but-for world 4 these restraints are removed, then 5 the foreclosure falls. I don't 6 need an econometric proof of that. 7 It -- it just follows from 8 elementary logic.</p> <p>9 BY MR. ISAACSON:</p> <p>10 Q. Right. Well, for example, 11 when we looked at Figure 3, you told me 12 things you thought were important, but 13 you didn't have any sort of mathematical 14 analysis to say, here's a clause that 15 relates to a specific foreclosure 16 percentage; is that right?</p> <p>17 A. That is correct. I think -- 18 I did not perform an inquiry as to the 19 causes or drivers historically of a 20 foreclosure share. One could do that. 21 It sounds like there would be another 22 econometric exercise. But the 23 foreclosure share, as I've measured it, 24 is what it is, and it's an explanatory</p>	<p>1 into allegedly exclusionary contracts 2 with the vast majority of top fighters, 3 and 3, taken other steps to use its 4 alleged dominance to impair potential 5 rivals."</p> <p>6 And then you've also. 7 Footnoting in footnote 2, the complaint. 8 Though that's -- I'm not clear on whether 9 that's not a footnote to the challenged 10 conduct.</p> <p>11 MR. CRAMER: No, that's a 12 footnote to the sentence at the 13 top of the page.</p> <p>14 MR. ISAACSON: Right.</p> <p>15 BY MR. ISAACSON:</p> <p>16 Q. So is the challenged conduct 17 a subset of the allegations in the 18 complaint?</p> <p>19 MR. CRAMER: Objection to 20 form. Foundation.</p> <p>21 THE WITNESS: I don't think 22 so. I think that when I lay out 23 my understanding of the challenged 24 conduct, I try to -- I try to</p>
<p>1 variable model.</p> <p>2 Q. Okay. Let's go to paragraph 3 1 of your report.</p> <p>4 A. Paragraph 1?</p> <p>5 Q. Yes. Page -- somehow that's 6 page 4 and 5.</p> <p>7 A. Got it.</p> <p>8 Q. I'm sorry, paragraph 2.</p> <p>9 A. Oh, paragraph 2.</p> <p>10 Q. You see in the middle 11 there's the definition of challenged 12 conduct?</p> <p>13 "Plaintiffs allege that 14 these actions taken together, the 15 'challenged conduct.'"</p> <p>16 A. Yes.</p> <p>17 Q. Okay. And the -- and in 18 paragraph 2 you list three things. 19 "1, Zuffa" -- Zuffa's 20 alleged to have, 1, eliminated potential 21 rival MMA promoters through horizontal 22 acquisitions; 2, deprived potential 23 rivals of key inputs, the fighters 24 themselves, by entering" -- "entering</p>	<p>1 trace the conduct that's being 2 challenged in the complaint.</p> <p>3 BY MR. ISAACSON:</p> <p>4 Q. Okay. And I'm -- we're 5 going to focus on taken other steps to 6 use its alleged dominance to impair 7 potential rivals, because perhaps you'll 8 agree with me that that lacks 9 specificity, but that's okay for an 10 introduction.</p> <p>11 A. Exactly.</p> <p>12 Q. Right, right, right.</p> <p>13 A. It's made very explicit 14 later on in the draft.</p> <p>15 Q. And then footnoting to 16 that --</p> <p>17 A. In the report, sorry.</p> <p>18 Q. -- at the end of that 19 sentence, it's to part VII A. If I 20 wanted to understand the complete 21 challenged conduct, is that where I would 22 look to?</p> <p>23 A. I don't think so. Let me 24 look at part 7A. That could be a typo.</p>

1 Q. It even gets confusing, your
2 Table of Contents doesn't have a 7A.

3 A. Right. So let me --

4 MR. CRAMER: I think it
5 means 2.

6 THE WITNESS: Yeah.

7 MR. ISAACSON: 2A?

8 THE WITNESS: Yeah.

9 MR. CRAMER: There's a
10 section of the report called --
11 under Roman II called Nature of
12 the Challenged Conduct.

13 MR. ISAACSON: That would
14 make more sense, yes.

15 THE WITNESS: You want to
16 strike the V there.

17 BY MR. ISAACSON:

18 Q. All right. So II A is the
19 horizontal conduct?

20 A. Yes.

21 Q. And so is that the item 3 in
22 your paragraph 2, the other -- the other
23 conduct, is it the horizontal conduct?

24 A. No.

1 that I'm measuring.

2 Q. All right. The -- you are
3 measuring an increase in foreclosure due
4 to the acquisition of rivals by Zuffa; is
5 that right?

6 MR. CRAMER: Asked and
7 answered, form.

8 THE WITNESS: Conditional on
9 Zuffa using exclusive contracts of
10 a sufficient duration, then yes,
11 bringing on more fighters and
12 funneling them through that
13 mechanism is causing foreclosure
14 to go up.

15 In contrast, if Zuffa were
16 not using exclusive contracts of a
17 sufficient duration and made a
18 horizontal acquisition, then by my
19 regression model, at least, there
20 would be no increase in
21 foreclosure share and there would
22 be no anticompetitive effects.

23 In other words, the vertical
24 restrictions on fighter mobility

1 Q. Okay. Would it be
2 everything in No. II that's -- would
3 your -- would the -- Roman numeral II,
4 would that section capture the challenged
5 conduct?

6 A. Roman II captures the
7 challenged conduct.

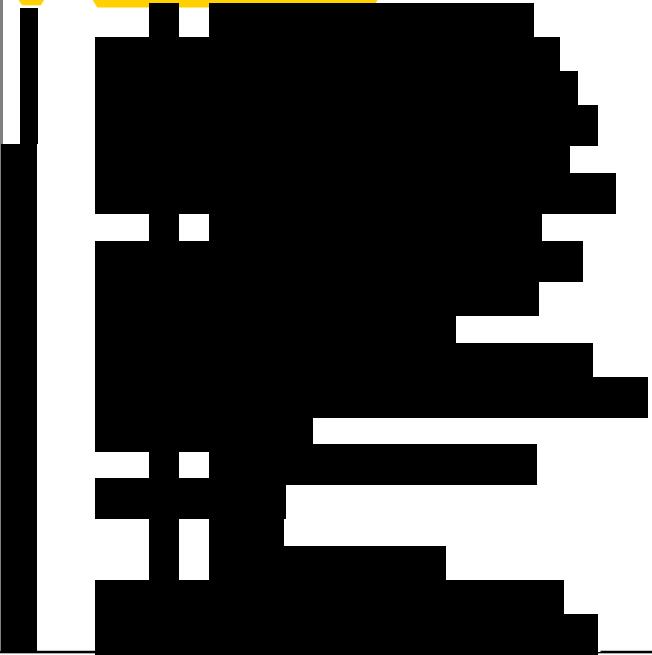
8 Q. Okay. Maybe I just got us
9 another errata.

10 The -- now, the esti- --
11 your challenged conduct includes
12 horizontal conduct and vertical conduct.
13 As I understand it, from what you've said
14 today, that you are not estimating injury
15 or damages from the horizontal conduct;
16 is that right?

17 A. I think I'm not -- I'm not
18 estimating any -- any impact or damages
19 that flow entirely through the
20 horizontal. What -- what's important and
21 what drives the damages and the impact in
22 my models are the vertical restraints.
23 They're doing the -- that is the
24 mechanism of harm that I'm capturing,

1 are doing -- is the only necessary
2 condition, it is doing all the --
3 all the lifting, if you will,
4 according to my model.

5 BY MR. ISAACSON:



10 BY MR. ISAACSON:

11 Q. Fine. You discuss
12 counter-programming in your report. I
13 can refer you to that, but if you're
14 general familiar with the topic.

15 A. Yes.

16 Q. All right. You are -- am I
17 correct that you are not attributing any
18 increase in foreclosure percentage to
19 counter-programming or would you know?

20 A. I'll give you the same
21 answer I just gave you for the
22 acquisitions. If you strip away the
23 restrictions on the fighter mobility, the
24 exclusive long-term contracts, then the

1 presence of the counter-programming would
2 not engender higher foreclosure shares
3 according to my model, would not generate
4 the wage effects that -- that my model is
5 showing.

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12 Q. In general, we'll save time
13 if you tell me whether you have opinions
14 as opposed to what you imagine.

15 A. Okay.

16 Q. Or could imagine. I don't
17 mean that as a criticism, I mean that as
18 constructive.

19 MR. CRAMER: Constructive
20 criticism.

21 MR. ISAACSON: No, not even
22 that. A constructive way to get
23 through the day.

24 MR. CRAMER: Advice.

1 with respect to, say, a finding of
 2 monopsony power in the input
 3 market.

4 BY MR. ISAACSON:

5 Q. Well, you do have findings
 6 of monopsony power that do rely on
 7 revenue weighting, right?

8 A. I think that under the --
 9 under the indirect approach and under
 10 only one pass through the indirect
 11 approach, I weight fighters by -- by
 12 revenues to make an inference about
 13 Zuffa's high shares in that relevant
 14 input market.

15 Q. Right.

16 A. But as you know, that's only
 17 one of many, many approaches that allow
 18 me to get to the conclusion of monopsony
 19 power.

20 Q. Okay.

21 A. I actually prefer --

22 Q. So let's return --

23 A. Can I finish?

24 Q. I thought you were.

1 construct a scenario about how
 2 that could occur.

3 BY MR. ISAACSON:

4 Q. All right. The -- and then
 5 you've described geographic market for
 6 the output market also. And is that also
 7 North America?

8 A. Yes.

9 Q. All right. The -- and in
 10 terms of your SSNIP analysis -- all
 11 right. So did you do -- well, my
 12 colleague wants to know so it seems like
 13 a good question.

14 A. I'm sure it is.

15 Q. In the out -- in the output
 16 market, what is being sold? In the
 17 output markets that you have defined.

18 A. Sure. I think that you
 19 are -- the production or the product that
 20 is being produced are -- is live MMA
 21 events and the revenue associated with
 22 those events can take the form of gate
 23 revenue or pay-per-view. That's from --
 24 from the consumer side. Of course,

1 A. I prefer direct evidence
 2 generally, and I think that I've -- I
 3 offer a slew of evidence that speaks to
 4 how you can prove directly that Zuffa
 5 exercises monopsony power.

6 Q. I understand that you
 7 offered direct and indirect evidence, but
 8 I need to ask about them one at a time
 9 and we can cover both.

10 A. Okay.

11 Q. So in terms of when you
 12 define a market, can you describe to me a
 13 situation where if you use revenue
 14 weighting in the input market, where
 15 the -- a monopoly firm would not
 16 necessarily have a monopoly in the input
 17 market?

18 MR. CRAMER: Incomplete
 19 hypothetical, form.

20 THE WITNESS: I've never
 21 given thought to that, and I'd
 22 like to think about it and maybe
 23 we'll come back. But I don't
 24 think I'm prepared to -- to

1 there's -- there's revenues from the
 2 advertiser's side as well.

3 But I hope that answers your
 4 question.

5 Q. All right. And does
 6 pay-per-view compete with broadcast?

7 MR. CRAMER: Objection to
 8 form.

9 THE WITNESS: I did not
 10 conduct that inquiry.

11 BY MR. ISAACSON:

12 Q. Do you have an opinion one
 13 way or another about that?

14 A. No.

15 Q. All right. With respect to
 16 the -- does -- do the live venue events
 17 compete with pay-per-view events?

18 A. I don't even understand the
 19 question. Many of the pay-per-view
 20 events are live.

21 Q. Meaning I watch it on
 22 pay-per-view as opposed to go see it
 23 live.

24 A. I haven't -- I haven't

1 studied that and I imagine for someone
 2 who lives very far from the venue where
 3 the live event is staged, they would not
 4 be considered reasonably close
 5 substitutes.

6 Q. So for your input markets,
 7 what evidence did you take into account
 8 to assess customer's likely response to
 9 price increase in the SSNIP analysis?
 10 And feel free to point me to the sections
 11 of your report that --

12 A. Did you mean to say -- I
 13 think you just conflated the input
 14 markets and customers. Maybe we should
 15 start over.

16 Q. Yes, I said price increase
 17 rather than wage decrease, but let me
 18 just put it this way: What evidence in
 19 your report did you take into account to
 20 assess the likely response to a SSNIP in
 21 the input markets?

22 A. Sure. So there it's the
 23 perspective of the fighters not the
 24 customers. So I was tripping up over

1 to --
 2 MR. CRAMER: Okay.
 3 MR. ISAACSON: I'm not going
 4 to ask him to recite all the
 5 documentary evidence.

6 BY MR. ISAACSON:

7 Q. And I understand that
 8 there's documentary evidence that you're
 9 not reciting today.

10 Okay. Other than the record
 11 evidence of the -- about sub- --
 12 perceptions of substitutability from the
 13 stakeholders, what would be other parts
 14 of your SSNIP analysis for the input
 15 market?

16 A. I would direct you to
 17 Section 3A 1 for all of the evidence that
 18 I used to inform the construction of the
 19 relevant input market.

20 Q. That would be the record
 21 evidence that you were referring to?

22 A. Well, record evidence is
 23 fairly broad, right, because it
 24 encompasses almost everything. But I

1 your --

2 Q. Yes.

3 A. -- injecting customers when
 4 we're talking about input markets.

5 So I can take you to the
 6 relevant sections, and I will, but of
 7 course at high levels, I'm looking at
 8 record evidence of -- of what fighters
 9 and promoters thought about substitution
 10 possibilities as you -- if you were to
 11 move away from Zuffa to counteract a
 12 hypothetical wage cut.

13 Q. Okay. So the first thing
 14 you looked at was record evidence of
 15 substitution.

16 A. Or the perception of
 17 substitution from the stakeholders, the
 18 fighters, the promoters, and I'll just
 19 point you, if you --

20 Q. That's -- that's sufficient
 21 for -- for item 1.

22 MR. CRAMER: You asked him
 23 to look at his report.

24 MR. ISAACSON: I'm going

1 will point -- to me the -- what helps to
 2 guide me to the findings that I made with
 3 respect to the input market was the fact
 4 that Zuffa was able to successfully
 5 suppress fighter wages, wages either
 6 measured by -- by wage share, regression
 7 or by knowledge of the fact that wage
 8 shares were falling over time from
 9 26 percent to 18 percent, yet Zuffa did
 10 not suffer sufficient defection so as to
 11 render that wage decrease unprofitable.

12 Now, that -- that tells you,
 13 as a matter of economics, that a -- that
 14 a reasonable starting place for defining
 15 the contours of the relevant input market
 16 is just the fighters under Zuffa's
 17 control. That was the -- the first thing
 18 that occurred to me.

19 And once you -- once you
 20 start there, you can start looking at
 21 record evidence to determine whether
 22 additional fighters from -- from rival
 23 promotions ought to be included so that
 24 you eventually get to the smallest set of

1 fighters such that a hypothetical
 2 monopsonist could profitably exercise
 3 monopsony power.

4 Q. All right. And you said
 5 that Zuffa was able to successfully
 6 suppress fighter wages -- wage share.
 7 You were talking only about the share of
 8 revenues there, correct?

9 A. Correct.
 [REDACTED]

1 BY MR. ISAACSON:

2 Q. So my actual question was --
 3 I understand you're focused on that, but
 4 my question is, did you look at whether
 5 Zuffa actually suppressed actual wages?

6 A. Without controlling for
 7 revenues, no. Because it's incorrect to
 8 do so.

9 Q. So in performing your SSNIP
 10 analysis for the input markets, is it
 11 fair to say that you relied on the record
 12 evidence about the issue of perceived
 13 substitution from the stakeholders along
 14 with your observations that when Zuffa
 15 suppressed fighter wage shares, there
 16 weren't significant defections?

17 A. I think -- I think that
 18 encompasses a lot. I also think that
 19 Zuffa in its ordinary course of business
 20 made use of a FightMetrics (sic)
 21 database. I had -- the very first thing
 22 I did when I -- when I got this case was
 23 I started reading the economic literature
 24 on the MMA industry, and almost every

5 BY MR. ISAACSON:

6 Q. All right. But in your --
 7 in your hypothetical there you held
 8 revenues constant. Did you look at, as
 9 part of your analysis of the input market
 10 and defining that market, as to whether
 11 Zuffa actually suppressed actual wages?

12 MR. CRAMER: Objection to
 13 form.

14 BY MR. ISAACSON:

15 Q. As opposed to wage share?

16 MR. CRAMER: Same objection.

17 THE WITNESS: I'm focused on
 18 wage share, of course, because
 19 it's the right thing to look at
 20 from an economic perspective.
 21 We're trying to measure
 22 exploitation, and the textbooks
 23 tell you to do it as a share of
 24 marginal revenue product.

1 article I read, the FightMetrics (sic)
 2 database formed the foundation of their
 3 empirical analysis.

4 So I thought that that was a
 5 reasonable place to begin to posit what
 6 the smallest set of fighters that could
 7 be under the control of a hypothetical
 8 monopsony would be in order for it to
 9 exercise market power.

10 Q. All right. Why did you use
 11 the smallest set of fighters not the
 12 smallest amount of promoters?

13 A. Well, because we're looking
 14 at the input market. The fighters form
 15 the elements of the input market. They
 16 happen to belong to promoters, but
 17 fighters are the elements or the
 18 ingredients.

19 But I'm -- if I'm a
 20 fighter -- just to make it clear, if I'm
 21 a fighter and I'm thinking about
 22 substituting, defecting from UFC and
 23 going to a rival promotion, I don't care
 24 what the name of the promotion is or

<p style="text-align: right;">Page 298</p> <p>1 who's running it or who the chief 2 matchmaker is, I want to make sure that 3 I'm going to be put inside of a pool 4 of -- of fighters such that I have a 5 prospect of elevating through the ranks. 6 It's the fighters that determine what a 7 reasonable substitute is when fighters 8 are considering defecting.</p> <p>9 Q. Now, you're not suggesting 10 that Zuffa used the Fight Matrix data to 11 define a market, are you?</p> <p>12 A. Well, you just toggled from 13 FightMetrics (sic) to Fight Matrix.</p> <p>14 Q. I'm sorry, FightMetrics 15 (sic). Sorry. I was bound to do that 16 today.</p> <p>17 But you're not suggesting 18 that Zuffa used FightMetrics (sic) data 19 to define a market?</p> <p>20 A. I'm suggesting that firms 21 are not -- are not employed -- firms are 22 not in the businesses of defining 23 relevant product markets as the normal 24 course of business, right? They're doing</p>	<p style="text-align: right;">Page 300</p> <p>1 perceptions of substitutability from 2 stakeholders, your observations about how 3 Zuffa suppressed fighter wage shares 4 without defections or significant 5 defections, and Zuffa's reliance on the 6 FightMetrics (sic) database?</p> <p>7 MR. CRAMER: Would you like 8 him to look at his report, is that 9 what you're asking?</p> <p>10 MR. ISAACSON: He can look 11 at his report in answering the 12 questions. I've allowed him to do 13 that for every question.</p> <p>14 MR. CRAMER: Okay, good.</p> <p>15 THE WITNESS: By looking at 16 it, it refreshes my memory that in 17 paragraph 101, for example, I'm 18 looking at evidence, again from 19 the perspective of what I call 20 stakeholders, or mostly fighters, 21 as to whether or not some -- some 22 sport outside of MMA would 23 constitute a reasonable substitute 24 to defect to in response to a wage</p>
<p style="text-align: right;">Page 299</p> <p>1 something else. Defining markets is the 2 task of an antitrust economist.</p> <p>3 Q. All right.</p> <p>4 A. But I do think it's 5 important that Zuffa uses and relies on 6 the FightMetrics (sic) database in its 7 ordinary course of business.</p> <p>8 Q. All right. And is that part 9 of -- do you consider that -- that 10 observation that Zuffa relies on the 11 FightMetrics (sic) database to be part of 12 your SSNIP analysis?</p> <p>13 A. I think it undergirds the 14 conclusion that -- that this is the 15 relevant set of fighters that would need 16 to be under the control of a hypothetical 17 monopsonist so that the wage decrease 18 below competitive levels would not be 19 rendered unprofitable.</p> <p>20 Q. Right. So does your SSNIP 21 analysis for the input markets consist of 22 anything other than the things that 23 you've listed so far: The record 24 evidence of substitution -- of</p>	<p style="text-align: right;">Page 301</p> <p>1 decrease.</p> <p>2 And we can go through 3 paragraph-by-paragraph. I don't 4 know if that's how you want me to 5 use the time --</p> <p>6 BY MR. ISAACSON:</p> <p>7 Q. I thought -- I thought that 8 as encompassed within the record evidence 9 of perceptions of substitute billing.</p> <p>10 A. Right. But why -- I mean, I 11 wouldn't say why we go by my memory of 12 what I used, we have the report and we 13 can go paragraph-by-paragraph and I 14 can --</p> <p>15 Q. Your report is long, I'm 16 trying to see if I can get a summary of 17 your conclusions with you having access 18 to your report.</p> <p>19 MR. CRAMER: So he wants you 20 to take your time and make sure 21 that you've adequately summarized 22 your conclusions and the evidence 23 upon which they're based.</p> <p>24 THE WITNESS: Okay.</p>